REMARKS

In the Office Action dated February 12, 2007, claims 1, 2, 9, and 10 were rejected over Skold and Hanson under 35 U.S.C. § 112, ¶ 2; claims 1, 5, 6, 9, 13, and 14 were rejected under § 103; and claims 3, 4, 7, 8, 12, 15, and 16 were indicated as allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims.

Claims 2 and 10 have been cancelled to render the § 112 rejection moot.

It is respectfully submitted that a *prima facie* case of obviousness has not been established with respect to claim 1.

Skold relates to a method and apparatus for forming a channel estimate in a digital radio communication system. The idea in Skold is to form a combined channel estimate by averaging a long channel estimate and a short channel estimate.

It is to be reminded that claim 1 recites a method for detecting a signal burst, such as a random access burst, for example. Amended claim 1 recites the evaluation of a *signal burst* detection magnitude which is obtained on the basis of the estimated channel parameters and of a correlation between a signal received at the receiver. Furthermore, the estimated channel parameters comprise moments of order greater than 2 of the gain on the radio channel.

The Office Action asserted that in Skold the detection of magnitude is evaluated in block 24. As the claims are now amended to clarify that the detection magnitude is the signal burst detection magnitude, the Applicant is of the opinion that this is not disclosed or hinted at in Skold. The Examiner seems to believe that the detection magnitude in the present invention corresponds to the averaging in Skold. However, in block 24 the short and long channel estimates are simply averaged but the obtained averaged channel estimate is not related to the detection signal bursts. Furthermore, even if Skold discloses the correlation, it is not actually clear whether the correlation result is advantageously used in block 24. It seems that this is not the case, since block 16 (correlation) is not even connected to block 24. Thus it seems that the correlation result is not used for the averaging operation.

As was also acknowledged in the Office Action, Skold also fails to disclose that the estimated channel parameters comprise moments of order greater than 2 of the gain on the radio channel. Thus, it becomes clear that the solution provided by Skold is very different from the solution provided by the proposed invention. Some embodiments of the present invention aim at

improving detection of signal burst, whereas Skold aims at improving channel estimation in communication systems.

The Office Action has also cited Hanson. Hanson relates to optical waveguide fibers and, in particular, to methods for determining optical properties of such fibers using an optical time domain reflectometer (OTDR). More generally, the invention relates to methods for reducing the noise in an electrical signal, such as the electrical signal produced by an OTDR. Thus, the teachings of Hanson reside in a quite distinct field, if compared to the subject matter of the present invention and Skold.

The Office Action stated that Hanson provides the missing link in order to arrive at the present invention. However, the Applicant is of the opinion that a skilled man when considering the teachings of Skold would not consider Hanson, since there appears to be no incentive or reason of doing this. Skold uses formula 9 for calculating the tap noise, but it does not search for any methods reducing the interference. Thus, the teachings of Hanson are irrelevant, and a skilled man would not get any benefit from the combination of the teachings of these documents.

Furthermore, when reading the teachings of Hanson, it does not become clear what the channel parameters are that comprise the moments of order greater than 2. The Office Action is referring to a cubic spline function, column 4, line 14, but these functions are merely mathematical functions comprising a set of polynomials. In Hanson a preferred procedure for obtaining the estimate of the electrical signal's local signal to noise ratio is to fit a continuous function to the electrical signal and use the difference between that function and the electrical signal, or a function of that difference, as an estimate of the local signal to noise ratio. A particularly preferred function for this fitting is a spline and, in particular, a cubic spline.

There is no indication that the parameters in the spline function are channel parameters. Moreover, it is clear that the parameters in the spline function cannot be the same parameters which are used for obtaining the detection magnitude. Furthermore, in Hanson there is no indication that the parameters comprise moments of order greater than 2 of the gain on the radio channel. Hanson does not disclose the notation of radio channel gain.

Thus, based on the foregoing, the hypothetical combination of Skold and Hanson do not teach or hint at the present invention.

Independent claim 9 is allowable for similar reasons. Dependent claims are allowable for at least the same reasons as corresponding independent claims.

Allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 20-1504 (MTR.0071US).

Respectfully submitted,

Date: June 12, 2007

Dan C. Hu
Registration No. 40,025
TROP, PRUNER & HU, P.C.
1616 South Voss Road, Suite 750
Houston, TX 77057-2631
Telephone: (713) 468-8880
Facsimile: (713) 468-8883